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PTO/SB/21 (09-04)

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TRANSMITTAL  
FORM

(to be used for all correspondence after initial filing)

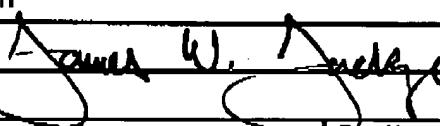
Total Number of Pages in This Submission

Application Number	10/065,552
Filing Date	October 29, 2002
First Named Inventor	Shigeru Sawada
Art Unit	2814
Examiner Name	Wai Sing Louie
Total Number of Pages in This Submission	31
Attorney Docket Number	39.002-AG

## ENCLOSURES (Check all that apply)

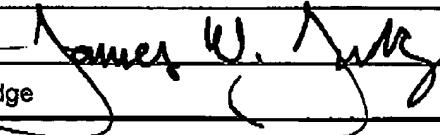
<input checked="" type="checkbox"/> Fee Transmittal Form	<input type="checkbox"/> Drawing(s)	<input type="checkbox"/> After Allowance Communication to TC
<input checked="" type="checkbox"/> Fee Attached	<input type="checkbox"/> Licensing-related Papers	<input type="checkbox"/> Appeal Communication to Board of Appeals and Interferences
<input type="checkbox"/> Amendment/Reply	<input type="checkbox"/> Petition	<input type="checkbox"/> Appeal Communication to TC (Appeal Notice, Brief, Reply Brief)
<input type="checkbox"/> After Final	<input type="checkbox"/> Petition to Convert to a Provisional Application	<input type="checkbox"/> Proprietary Information
<input type="checkbox"/> Affidavits/declaration(s)	<input type="checkbox"/> Power of Attorney, Revocation	<input type="checkbox"/> Status Letter
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<input type="checkbox"/> Certified Copy of Priority Document(s)	<input type="checkbox"/> CD, Number of CD(s) _____	
<input type="checkbox"/> Reply to Missing Parts/ Incomplete Application	<input type="checkbox"/> Landscape Table on CD	
<input type="checkbox"/> Reply to Missing Parts under 37 CFR 1.52 or 1.53		
Remarks		

## SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

Firm Name	Judge Patent Firm		
Signature			
Printed name	James W. Judge		
Date	March 2, 2005	Reg. No.	42,701

## CERTIFICATE OF TRANSMISSION/MAILING

I hereby certify that this correspondence is being facsimile transmitted to the USPTO or deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on the date shown below:

Signature			
Typed or printed name	James W. Judge	Date	March 2, '04

This collection of information is required by 37 CFR 1.5. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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# FEE TRANSMITTAL

## For FY 2005

 Applicant claims small entity status. See 37 CFR 1.27

**TOTAL AMOUNT OF PAYMENT** (\$)
 **180.00**
**Complete if Known**

Application Number	10/065,552
Filing Date	October 29, 2002
First Named Inventor	Shigeru Sawada
Examiner Name	Wal Sing Louie
Art Unit	2814
Attorney Docket No.	39.002-AG

**METHOD OF PAYMENT** (check all that apply)

Check  Credit Card  Money Order  None  Other (please identify): \_\_\_\_\_  
 Deposit Account Deposit Account Number: \_\_\_\_\_ Deposit Account Name: \_\_\_\_\_  
 For the above-identified deposit account, the Director is hereby authorized to: (check all that apply)  
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**FEE CALCULATION****1. BASIC FILING, SEARCH, AND EXAMINATION FEES**

Application Type	FILING FEES		SEARCH FEES		EXAMINATION FEES		Fee Paid (\$)
	Fee (\$)	Small Entity Fee (\$)	Fee (\$)	Small Entity Fee (\$)	Fee (\$)	Small Entity Fee (\$)	
Utility	300	150	500	250	200	100	_____
Design	200	100	100	50	130	65	_____
Plant	200	100	300	150	160	80	_____
Reissue	300	150	500	250	600	300	_____
Provisional	200	100	0	0	0	0	_____

**2. EXCESS CLAIM FEES****Fee Description**

Each claim over 20 (including Reissues)

Each independent claim over 3 (including Reissues)

Multiple dependent claims

Total Claims	Extra Claims	Fee (\$)	Fee Paid (\$)	Multiple Dependent Claims	
				Fee (\$)	Fee (\$)
- 20 or HP =	x	=		50	25

HP = highest number of total claims paid for, if greater than 20.

Indep. Claims	Extra Claims	Fee (\$)	Fee Paid (\$)	Multiple Dependent Claims	
				Fee (\$)	Fee Paid (\$)
- 3 or HP =	x	=			

HP = highest number of independent claims paid for, if greater than 3.

**3. APPLICATION SIZE FEE**

If the specification and drawings exceed 100 sheets of paper (excluding electronically filed sequence or computer listings under 37 CFR 1.52(e)), the application size fee due is \$250 (\$125 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(C) and 37 CFR 1.16(s).

Total Sheets	Extra Sheets	Number of each additional 50 or fraction thereof	Fee (\$)	Fee Paid (\$)
- 100 =	/ 50 =	(round up to a whole number) x		=

**4. OTHER FEE(S)**

Non-English Specification, \$130 fee (no small entity discount)

Other (e.g., late filing surcharge): 1.17(p) Submission of an Information Disclosure Statement

Fee Paid (\$)

180.00

**SUBMITTED BY**

Signature

Registration No.  
(Attorney/Agent) 42,701

Telephone 305-938-7119

Name (Print/Type) James W. Judge

Date March 2, 2005

This collection of information is required by 37 CFR 1.136. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 30 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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MAR 02 2005

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

App. No. : 10/065,552 Confirmation No. 7687  
Applicant : Shigeru Sawada, et al.  
Filed : October 29, 2002  
Tech. Cntr./Art Unit : 2814  
Examiner : Wai Sing Louie  
  
Docket No. : 39.002-AG  
Customer No. : 29453

Honorable Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

**INFORMATION DISCLOSURE STATEMENT**

Sir:

This constitutes an Information Disclosure Statement pursuant to 37 C.F.R. §§ 1.97 and 1.98. The attached documents listed on the accompanying Form PTO/SB/08A are hereby brought to the Examiner's attention in the patent application identified above.

**REMARKS**

Of the three presently submitted references, i.e., Cite Nos. F1 and O2 as listed on Form PTO/SB/08A, are not in English. These three references were cited in a communication from the Japanese Patent Office in a counterpart Japanese application.

**Concise Explanation of Relevance/Copy of Translation  
Pursuant to 37 C.F.R. § 1.98(a)(3)**

As a concise explanation of the relevance of the presently submitted Japanese-language references, an English translation of pertinent portions of the Japanese Patent Office communication—which was in Japanese Pat. App. No. 2001-340527, the foreign patent application on the basis of which priority is claimed in the present application—is submitted herewith.

03/03/2005 EKOLI1 00000002 10065552

App. No. 10/065,552  
IDS Submission dated March 2, 2005

(A copy of the Japanese Patent Office communication in its entirety, with borders drawn around the text containing the rejections, follows the English translation.)

Furthermore, a partial English translation of Cite No. F1 has been made available to Applicant's representative and is being submitted herewith. Borders have been drawn around the sections in the Japanese original text corresponding to the partial English translation.

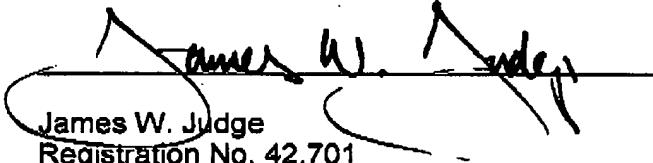
Furthermore, an English translation of the entirety of Cite No. O2 is attached to the back of the reference.

As the date on which the Japanese Patent Office communication citing the presently submitted information was November 16, 2004, an attestation under 37 C.F.R. § 1.97(e) cannot be made. Accordingly, a credit-card payment form authorizing payment of the fee under 37 C.F.R. § 1.17(p), together with a Fee Transmittal form, also accompanies this paper.

The Examiner is respectfully requested to consider these references, and to indicate so on the accompanying Form PTO/SB/08A and make the document of record in the present application.

Respectfully submitted,

March 2, 2005

  
James W. Judge  
Registration No. 42,701

JUDGE PATENT FIRM  
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PTO/SB/08A (10-01)

Approved for use through 10/31/2002. OMB 0851-0031

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Substitute for form 1449A/PTO		Complete if Known	
<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> <i>(use as many sheets as necessary)</i>		Application Number	10/065,522
		Filing Date	October 29, 2002
		First Named Inventor	Shigeru Sawada
		Art Unit	2814
		Examiner Name	Wai Sing Louie
Sheet	1	of	2
		Attorney Docket Number	
		39.002-AG	

**U.S. PATENT DOCUMENTS**

## FOREIGN PATENT DOCUMENTS

Examiner Signature		Date Considered	
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\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> See *Kinds Codes of USPTO Patent Documents* at [www.uspto.gov](http://www.uspto.gov) or MPEP 901.04. <sup>3</sup> Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. <sup>6</sup> Applicant is to place a check mark here if English language translation is attached.

English language. Translation is available.  
Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

PTO/SB/088 (10-01)

Approved for use through 10/31/2002. OMB 0651-0031  
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**Substitute for form 1449B/P7O**

## **INFORMATION DISCLOSURE STATEMENT BY APPLICANT**

*(use as many sheets as necessary)*

Sheet 2 of 2

*Complete if Known*

Application Number	10/065,522
Filing Date	October 29, 2002
First Named Inventor	Shigeru Sawada
Group Art Unit	2814
Examiner Name	Wei Sing Louie
Attorney Docket Number	39.002-AG

## **OTHER PRIOR ART -- NON PATENT LITERATURE DOCUMENTS**

Examiner Signature		Date Considered	
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**\*EXAMINER:** Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> Applicant is to place a check mark here if English language Translation is attached.

**Burden Hour Statement:** This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. **DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO:** Assistant Commissioner for Patents, Washington, DC 20231.

Reference No. 1011402

Dispatch No. 417632

Dispatch Date: November 16, 2004

**Notification of Reasons for Rejection**

Patent Application No.: Patent Application No. 2001-340527

Draft Date: November 10, 2004

JPO Examiner: Kenichiro HASHIMOTO 3031 4R00

Representatives/Applicant: Mr. Hisao FUKAMI (and four others)

Applied Law: Patent Law Section 29(2)

This application is rejected for the following reasons. An opinion, if any, should be submitted within 60 days from the dispatched date of the notification.

**Reasons**

3. The inventions in the claims listed below of the subject application should not be granted a patent under the provision of Patent Law Section 29(2) since it could have easily been made by persons with ordinary skill in the art to which the inventions pertain, on the basis of the inventions described in the following publications which were distributed in Japan or foreign countries or the inventions which were publicly available through electrical communication lines prior to the filing of the subject application.

Note (About the cited documents, etc., see the list of the cited documents, etc.)

Reason 3

- Claims 1 and 2
- Cited reference 1 (V. Gopal et al.)
- Remark

In cited reference 1, there is described (refer, in particular, to the item 'Experiment') that, when a C-V measurement is conducted by bringing an electrolytic solution into contact with an InAs membrane in order to obtain carrier density, an EDTA aqueous solution is used as the electrolytic solution. And it is publicly well-known in the C-V measurement to make the application voltage high to obtain the carrier density at a deep location. Thus, in the invention set forth in cited reference 1, those skilled in the art could have readily conceived of applying a voltage exceeding 10 V for the measurement of the carrier density of the InAs membrane at a deep location.

- Claim 4
- Cited references 1 and 2 (V. Gopal et al. & Toshiba Tech. Disclosure)
- Remark

In a C-V measurement using a liquid electrode, use of the tyron liquid as the electrolytic solution for the liquid electrode is well known, as is set forth, for example, in cited reference 2.

- Claim 5

- Cited reference 3

(Japanese Pat. App. Pub. No. 50-86986)

- Remark

In cited reference 3 (refer to, in particular, p. 2, line 7 in the right lower column to p. 3, line 2 of the left upper column.), there is described that, in a C-V measurement, InSb is used as a sample, and that a liquid metal such as an In-Ga alloy, mercury, etc. is used as an electrode. Thus, in the invention set forth in cited reference 3, those skilled in the art could have readily conceived of using Ga, which is liquid around room temperature, as the electrode.

- Claims 7 and 8

- Cited reference 1 (V. Gopal et. al.)

- Remark

Non-destructive estimation of carrier density means that the physical properties of the wafer itself do not change at all prior to and after the measurement. Accordingly, the wafer in the invention set forth in Claims 7 and 8 has no difference from the wafer that has been subjected to the C-V measurement according to the method set forth in cited reference 1, and also no difference from the bare wafer that is not subjected to the C-V measurement.

## List of the cited documents, etc.

1. V. Gopal et al., Journal of ELECTRONIC MATERIALS, 2000年11月, Vol. 29. No. 11, p.1333-1339
2. Collection of Toshiba Technology Disclosure, March 23, 1998, Vol. 16-17, p139
3. Japanese Patent Application Publication No. 50-86986

## Record of results of prior art search

## • Technical fields to be searched:

IPC 7<sup>th</sup> edition H01L 21/66

## • Prior art documents

Japanese Patent Application Publication No. 2001-144154

Japanese Patent Application Publication No. 59-143339

Japanese Patent Application Publication No. 11-387490

Japanese Patent Application Publication No. 61-141127

The record is not a component of the reasons for rejection.

If you have any questions regarding this Notification of Reasons for Rejection and/or would like to have an interview, please contact the following:  
Mr. Kenichiro Hashimoto of Electronic Materials Manufacturing Division,  
Third Patent Examination Department.

TEL : 03 (3581) 1101 (ext. 3469)

FAX : 03 (3501) 0605